

# Mineral Industry Surveys

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#### MARKETABLE PHOSPHATE ROCK IN AUGUST 1999

U.S. marketable phosphate rock production in August 1999 increased 4% compared to the prior month, according to the U.S. Geological Survey (USGS). Annualized year-to-date production was 41.9 million metric tons, which was 5% lower than the total production in 1998.

Domestic phosphate rock sold or used, excluding exports for August, decreased 2% from the prior month, to 3.5 million tons. Annualized year-to-date sales or use was 42.7 million tons, about 2% lower than the total for 1998.

U.S. producer ending stocks for August were 3% higher than the figure shown in July.

Some phosphate rock import data for Morocco are suppressed by the Bureau of the Census; total U.S. import tonnage was estimated by USGS to average 150,000 tons per month, or 1.8 million tons per year. August import data were not available at the time of publication.

Annualized domestic consumption for 1999 was calculated to be 44.2 million tons using annualized sold and used data and estimated trade data. Apparent domestic consumption for 1998, calculated from the sum of home deliveries and adjusted import data, was 45.0 million tons.

Potash Corporation of Saskatchewan (PCS) announced the closure of several phosphate operations in response to weak market conditions caused by reduced domestic consumption and foreign sales. The company will permanently close the Saltville, VA, feed phosphate plant and temporarily close the Suwannee River hemihydrate plant at White Springs, FL. This will reduce the firm's  $P_2O_5$  capacity by 110,000 tons and remove 240,000 tons of diammonium phosphate (DAP) from the market. PCS will

also permanently close its Jacksonville, FL terminal and consolidate its phosphate export distribution system through Morehead City, NC (Green Markets, 1999).

IMC-Agrico Co. announced other temporary phosphate plant closures in response to market conditions. It suspended production of triple superphosphate at New Wales, FL, and sulfuric acid production at Nichols, FL. Phosphoric acid and DAP production at Nichols have been idled since October 1998 (IMC Global Inc., 1999).

In Jordan, a privatization agreement to operate and expand the Aqaba Railway System was signed by the railway's international operating group and the Government of Jordan. The group consists of Jordan Phosphate Mines Corp., Mitsubishi Corp. (Japan), Consolidated Contractors Corp. (Greece), and two U.S. firms, Raytheon Infrastructure Inc. and Wisconsin Central Transportation Corp. During the next three years, the consortium will modernize and expand the railway to connect the Eshidiya phosphate rock mine with the port of Aqaba (Fertilizer Markets, 1999).

#### **References Cited**

FertilizerMarkets, 1999, Elsewhere this week: FertilizerMarkets, v. 10, no. 6, August 23, p. 4.

Green Markets, 1999, PCS closes five facilities; some permanently: Green Markets, v. 23, no. 33, August 16, p. 1, 12.

IMC Global Inc., 1999, IMC-Agrico announces further production cutbacks at phosphate operations: Northbrook, IL, IMC Global Inc. press release, August 19, 1 p.

# TABLE 1 U.S. PHOSPHATE ROCK STATISTICS, BY REGION 1/

### (Thousand metric tons)

Region and period         production         used         stocks 2/           United States:         1998:           August         3.980         3.750         7,740           September         3.530         3.340         7,940           October         3.800         3.510         8.050           November         3.480         3.530         7,920           January - December         44.100         43.400         XX           1999:         3.410         3.400         7,730           January - December         44.100         43.400         XX           1999:         3.410         3.400         7,730           February         3.070         3.190         7,600           March         3.500         3,710         7,340           April         3.280         3,640         6,880           May         3.680         3,940         6,620           Jule         3.540         3,610         6,750           August         3.690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         3,10         3,310         6,120<		Marketable	Sold and/or	Ending
1998:   3,980   3,750   7,740   September   3,530   3,340   7,940   October   3,800   3,870   8,050   November   3,680   3,510   8,050   December   3,480   3,530   7,920   January - December   44,100   43,400   XX   1999:	Region and period	production	used	stocks 2/
August	United States:	•		
September         3,530         3,340         7,940           October         3,800         3,870         7,850           November         3,680         3,510         8,050           December         3,480         3,530         7,920           January December         44,100         43,400         XX           1999:         3,410         3,400         7,730           February         3,070         3,190         7,600           March         3,500         3,710         7,340           April         3,280         3,640         6,880           May         3,680         3,940         6,620           June         3,690         3,400         6,910           July         3,540         3,610         6,750           August         3,690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         3,310         3,310         6,120           September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130	1998:			
October         3,800         3,870         7,850           November         3,680         3,510         8,050           December         3,480         3,530         7,920           January - December         44,100         43,400         XX           1999:         3,410         3,400         7,730           February         3,070         3,190         7,600           March         3,500         3,710         7,340           April         3,280         3,640         6,880           May         3,680         3,940         6,620           June         3,690         3,400         6,910           July         3,540         3,610         6,750           August         3,690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         3,310         3,310         6,120           September         3,380         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,640           December         3,110         3,130	August	3,980	3,750	7,740
November	September	3,530	3,340	7,940
December	October	3,800	3,870	7,850
January - December   44,100	November	3,680	3,510	8,050
1999:     3,410   3,400   7,730   7,600   March   3,500   3,710   7,340   April   3,280   3,640   6,880   May   3,680   3,940   6,620   June   3,690   3,530   6,920   July   3,540   3,530   6,920   Total   27,900   28,400   XX   Florida and North Carolina:   1998:	December	3,480	3,530	7,920
1999:     3,410   3,400   7,730   7,600   March   3,500   3,710   7,340   April   3,280   3,640   6,880   May   3,680   3,940   6,620   June   3,690   3,530   6,920   July   3,540   3,530   6,920   Total   27,900   28,400   XX   Florida and North Carolina:   1998:	January - December	44,100	43,400	XX
February         3,070         3,190         7,600           March         3,500         3,710         7,340           April         3,280         3,640         6,880           May         3,680         3,940         6,620           June         3,690         3,400         6,910           July         3,540         3,610         6,750           August         3,690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         8         8           August         3,310         3,310         6,120           September         3,080         2,880         6,360           October         3,370         3,320         6,380           December         3,110         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         1         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100 </td <td></td> <td></td> <td></td> <td></td>				
March         3,500         3,710         7,340           April         3,280         3,640         6,880           May         3,680         3,940         6,620           June         3,690         3,400         6,910           July         3,540         3,610         6,750           August         3,690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         3,310         3,310         6,120           September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,660           December         3,110         3,130         6,540           January - December         3,8600         37,800         XX           1999:         January         2,970         2,990         6,420           April         2,780         3,150         5,620           May         3,100         3,340         5,380           July         2,980	January	3,410	3,400	7,730
April   3,280   3,640   6,880   May   3,680   3,940   6,620   June   3,690   3,400   6,910   July   3,540   3,610   6,750   August   3,690   3,530   6,920   Total   27,900   28,400   XX   Florida and North Carolina:   1998:   August   3,310   3,310   6,120   September   3,080   2,850   6,360   October   3,370   3,320   6,360   November   3,360   3,130   6,660   December   3,110   3,130   6,540   January - December   38,600   37,800   XX   1999:   January   2,970   2,990   6,420   February   2,760   2,840   6,330   March   3,120   3,290   6,100   April   2,780   3,150   5,620   May   3,100   3,340   5,380   June   3,030   2,940   5,430   July   2,980   3,010   5,300   August   3,080   3,070   5,320   Total   23,800   24,600   XX   1999:   January - December   436   441   1,620   September   456   494   1,590   December   312   384   1,390   December   368   403   1,380   January - January   436   413   1,260   May   483   1,26	February	3,070	3,190	7,600
May         3,680         3,940         6,620           June         3,690         3,400         6,910           July         3,540         3,610         6,750           August         3,690         3,530         6,920           Total         27,900         28,400         XX           Florida and North Carolina:         1998:         8         8           August         3,310         3,310         6,120           September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,660           December         3,110         3,130         6,660           January - December         38,600         37,800         XX           1999:         January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,030         2,940         5,4	March	3,500	3,710	7,340
June	April	3,280	3,640	6,880
July	May	3,680	3,940	6,620
August	June	3,690	3,400	6,910
Total         27,900         28,400         XX           Florida and North Carolina:         1998:         September         3,310         3,310         6,120           September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         January - December         38,600         37,800         XX           1999:         January - December         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         1         456 <td>July</td> <td>3,540</td> <td>3,610</td> <td>6,750</td>	July	3,540	3,610	6,750
Florida and North Carolina: 1998:	August	3,690	3,530	6,920
1998:   August   3,310   3,310   6,120	Total	27,900	28,400	XX
August         3,310         3,310         6,120           September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         441         1,620           September         456         494         1,590           October         434         555         1,460	Florida and North Carolina:			
September         3,080         2,850         6,360           October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         4         456         494         1,590           October         434         555         1,460         November         312         384         1,390           December         368         403	1998:			
October         3,370         3,320         6,380           November         3,360         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         1998:         1           August         663         441         1,620           September         456         494         1,590           October         434         555         1,460           November         312         384         1,390	August	3,310	3,310	6,120
November         3,360         3,130         6,660           December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:	September	3,080	2,850	6,360
December         3,110         3,130         6,540           January - December         38,600         37,800         XX           1999:         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,030         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         456         494         1,590           August         663         441         1,620           September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX	October	3,370	3,320	6,380
January - December         38,600         37,800         XX           1999:         January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         312         344         1,620           September         456         494         1,590         00tober         434         555         1,460           November         312         384         1,390         1,380         1,380         1,380         1,380         1,380         1,380         1,380         1,380         1,280         1,280         1,280         1,280         1,280         1,280         1,280         1,280         1,240         1,240         1,240         1,240         1,240         1,240         1,240         1,240         1,2	November	3,360	3,130	6,660
1999:	December	3,110	3,130	6,540
January         2,970         2,990         6,420           February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         8         400         XX           August         663         441         1,620         5,670         XX           September         456         494         1,590         0ctober         434         555         1,460           November         312         384         1,390         1,380         1,380         1,380         1,380           January - December         5,490         5,670         XX         1999:         314         352         1,280           March         375         412         1,240         1,240         4,240	January - December	38,600	37,800	XX
February         2,760         2,840         6,330           March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         3         441         1,620           September         456         494         1,590         3,00	1999:			
March         3,120         3,290         6,100           April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440	January	2,970	2,990	6,420
April         2,780         3,150         5,620           May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:         3,000         3,000         XX           August         663         441         1,620         3,000         3,000         3,000         3,000         3,000         3,000         5,320         3,000         3,000         3,000         3,000         5,320         3,000         3,000         3,000         5,320         3,00	February	2,760	2,840	6,330
May         3,100         3,340         5,380           June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:               441              1,620           September         456             494             1,590           October             434             555             1,460           November             312             384             1,390               December             368             403             1,380               January - December             5,490             5,670             XX               1999:             314             352             1,280               March             375             412             1,240               April             499             483             1,260               May             582             604             1,240               June             662             461             1,480               J	March	3,120	3,290	6,100
June         3,030         2,940         5,430           July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:	April	2,780	3,150	5,620
July         2,980         3,010         5,300           August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998:                4400         XX           August         663         441         1,620           September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	May	3,100	3,340	5,380
August         3,080         3,070         5,320           Total         23,800         24,600         XX           Idaho and Utah:         1998: <ul> <li>August</li> <li>663</li> <li>441</li> <li>1,620</li> </ul> September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         January         436         413         1,310           February         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	June	3,030	2,940	5,430
Total         23,800         24,600         XX           Idaho and Utah:         1998:         September         456         441         1,620           September         456         494         1,590         0ctober         434         555         1,460           November         312         384         1,390         1,380	July	2,980	3,010	5,300
Idaho and Utah:           1998:         441         1,620           September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	August	3,080	3,070	5,320
1998:   August   663   441   1,620	Total	23,800	24,600	XX
August         663         441         1,620           September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	Idaho and Utah:			
September         456         494         1,590           October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	1998:			
October         434         555         1,460           November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	August	663	441	1,620
November         312         384         1,390           December         368         403         1,380           January - December         5,490         5,670         XX           1999:         January         436         413         1,310           February         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	September	456	494	1,590
December         368         403         1,380           January - December         5,490         5,670         XX           1999:         January         436         413         1,310           February         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	October	434	555	1,460
January - December         5,490         5,670         XX           1999:         314         352         1,280           February         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	November	312	384	1,390
1999:       January     436     413     1,310       February     314     352     1,280       March     375     412     1,240       April     499     483     1,260       May     582     604     1,240       June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	December	368	403	1,380
January     436     413     1,310       February     314     352     1,280       March     375     412     1,240       April     499     483     1,260       May     582     604     1,240       June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	January - December	5,490	5,670	XX
February         314         352         1,280           March         375         412         1,240           April         499         483         1,260           May         582         604         1,240           June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	1999:			
March     375     412     1,240       April     499     483     1,260       May     582     604     1,240       June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	January	436	413	1,310
April     499     483     1,260       May     582     604     1,240       June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	February	314	352	1,280
May     582     604     1,240       June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	March	375	412	1,240
June     662     461     1,480       July     563     602     1,440       August     614     459     1,600	April	499	483	1,260
June         662         461         1,480           July         563         602         1,440           August         614         459         1,600	May	582	604	
August 614 459 1,600	June	662	461	1,480
August 614 459 1,600	July	563	602	1,440
				1,600
			3,790	

Total
XX Not applicable.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes inventory adjustments.

## $\label{eq:table 2} TABLE~2$ U.S. IMPORTS OF PHOSPHATE ROCK 1/ 2/ 3/

(Thousand metric tons and thousand dollars)

Period	Quantity	Value
1998:		
July	61	3,750
August	65	3,930
September	62	3,440
October	78	5,530
November		
December	62	3,800
January - December	806	42,400
Total year 4/	1,760	92,700
1999:		
January	60	3,280
February	63	3,420
March	68	3,670
April	66	4,000
May	69	4,110
June	64	3,820
July	1	69
Total	391	22,400

<sup>1/</sup>C.i.f. (cost, insurance, and freight) values at U.S. ports.

Source: Bureau of the Census; data on the majority of phosphate rock imports from Morocco were suppressed by Census.

 ${\bf TABLE~3}$   ${\bf COMPARATIVE~U.S.~PHOSPHATE~ROCK~STATISTICS}$ 

(Million metric tons, unless otherwise specified)

	1997	1998	1999 1/
Marketable production:			
Florida and North Carolina	39.8	38.7	35.7
Idaho and Utah	6.1	5.5	6.1
Total 2/	45.9	44.2	41.9
Sold or used by producers:			
Florida and North Carolina	36.6	38.0	37.0
Idaho and Utah	5.5	5.6	5.7
Total 2/	42.1	43.7	42.7
Yearend stocks	7.9	7.9	6.9
Exports 3/	0.3	0.4	0.3
Average value per ton	\$34.80	\$42.70	\$48.30
Imports for consumption e/	1.8	1.8	1.8
Average value per ton	\$50.19	\$52.66	NA
Apparent consumption e/ 4/	43.6	45.0	44.2

e/Estimated. NA Not available.

 $<sup>2/\,\</sup>mathrm{Data}$  are rounded to three significant digits; may not add to totals shown.

 $<sup>3/\,\</sup>text{Data}$  for the current month were not available at time of publication.

<sup>4/</sup> Includes estimate for data suppressed by Bureau of the Census.

<sup>1/</sup> Annualized data.

<sup>2/</sup> Data may not add to totals shown because of independent rounding.

<sup>3/</sup> Source: Bureau of the Census.

<sup>4/</sup> Calculated as domestic sold or used plus imports minus exports, where imports are estimated to average about  $150,\!000$  tons per month.